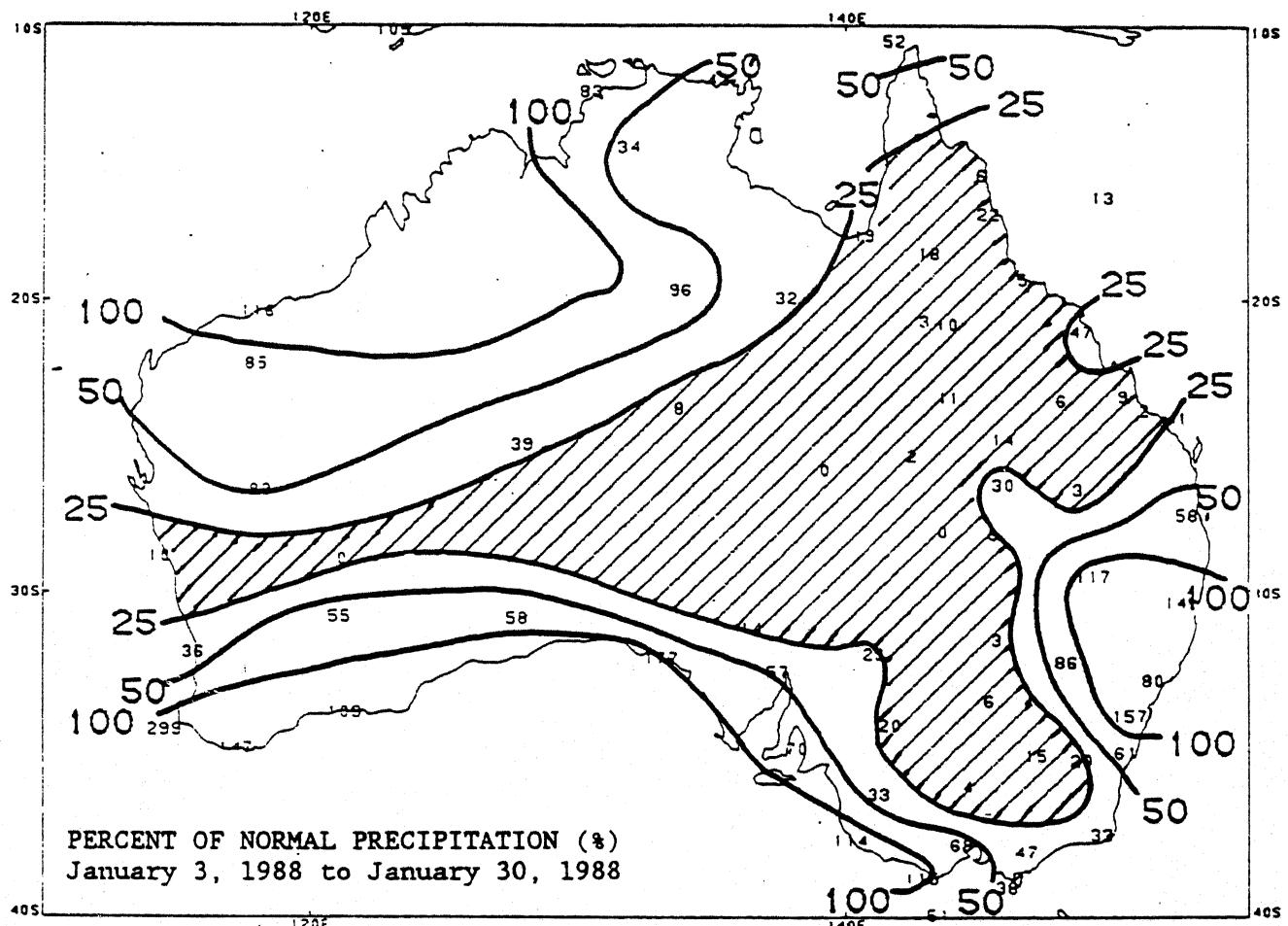


# WEEKLY CLIMATE BULLETIN

No. 88/05

Washington, DC

January 30, 1988



AUSTRALIA UNUSUALLY DRY LAST FOUR WEEKS.

NOAA - NATIONAL WEATHER SERVICE - NATIONAL METEOROLOGICAL CENTER

## WEEKLY CLIMATE BULLETIN

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This Bulletin is issued weekly by the Climate Analysis Center and is designed to indicate, in a brief, concise format, current surface climatic conditions in the United States and around the world. The Bulletin contains:

Highlights of major global climatic events and anomalies.  
U.S. climatic conditions for the previous week.  
U.S. apparent temperatures (summer) or wind chill (winter).  
Global two-week temperature anomalies.  
Global four-week precipitation anomalies.  
Global monthly temperature and precipitation anomalies.  
Global three-month precipitation anomalies (once a month).  
Global twelve-month precipitation anomalies (every 3 months).  
Global temperature anomalies for winter and summer seasons.  
Special climate summaries, explanations, etc. (as appropriate).

Most analyses contained in this Bulletin are based on preliminary, unchecked data received at the Center via the Global Telecommunication System. Similar analyses based on final, checked data are likely to differ to some extent from those presented here.

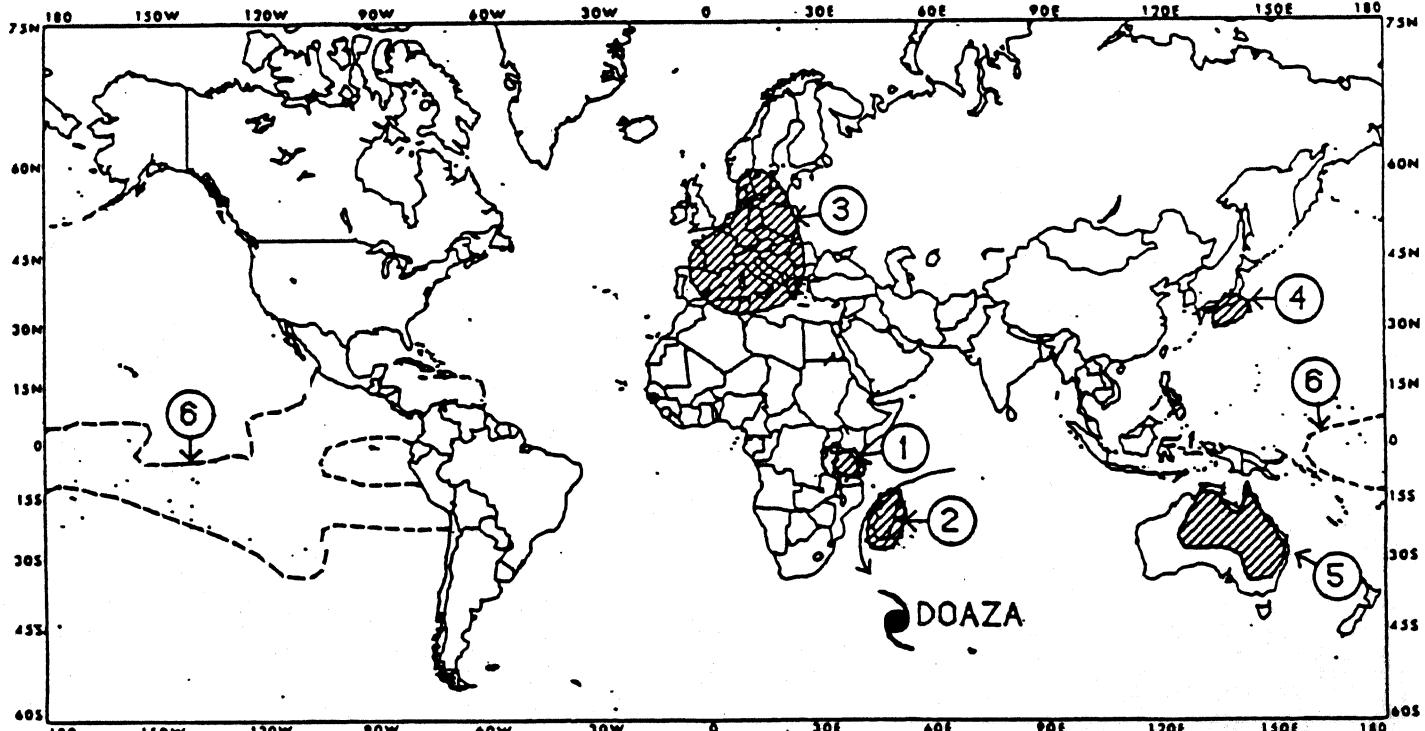
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# GLOBAL HIGHLIGHTS

MAJOR CLIMATIC EVENTS AND ANOMALIES AS OF JANUARY 30, 1988  
(Approximate duration of anomalies is in brackets.)

1. TANZANIA: WETNESS DECREASES.  
Little or no precipitation, less than 13 mm (0.51 inch), fell in Tanzania last week [Ending at 2 weeks].
2. MADAGASCAR ISLAND: WET CONDITIONS PERSIST.  
Tropical Storm Doaza brought heavy rains, up to 260.9 mm (10.27 inches), to the northern and western coasts of Madagascar Island. Lesser amounts fell elsewhere [3 weeks].
3. EUROPE AND NORTH AFRICA: EUROPE REMAINS MILD AS WARM CONDITIONS APPEAR IN ALGERIA AND TUNISIA.  
Europe remained unusually mild last week. Temperatures averaged as much as  $7.5^{\circ}\text{C}$  ( $13.5^{\circ}\text{F}$ ) above normal in Sweden. Unusually warm conditions spread across most of Tunisia and northern Algeria with temperatures up to  $7.1^{\circ}\text{C}$  ( $12.8^{\circ}\text{F}$ ) above normal [5 weeks].
4. EASTERN ASIA: MILD CONDITIONS DIMINISH.  
Temperatures started falling across most of Eastern Asia last week. Only Japan remains unusually mild with departures as much as  $4.4^{\circ}\text{C}$  ( $7.9^{\circ}\text{F}$ ) above normal [Ending at 3 weeks].
5. AUSTRALIA: WARM, DRY CONDITIONS DEVELOP.  
Little or no precipitation, less than 33.2 mm (1.31 inches), fell in north central and northeastern Australia last week as unusually dry conditions developed there. The dryness is aggravated by temperatures as much as  $4.7^{\circ}\text{C}$  ( $8.5^{\circ}\text{F}$ ) above normal [4 weeks].
6. CENTRAL AND EASTERN TROPICAL PACIFIC: REFER TO DECEMBER 1987 EL NINO/SOUTHERN OSCILLATION (ENSO) ADVISORY.  
The sea surface temperatures remained  $1^{\circ}\text{C}$  ( $1.8^{\circ}\text{F}$ ) to  $2^{\circ}\text{C}$  ( $3.6^{\circ}\text{F}$ ) above normal through December. The area above  $1^{\circ}\text{C}$  ( $1.8^{\circ}\text{F}$ ) is outlined for December 1987. The January 1988 ENSO summary will appear in the middle of February.



Approximate locations of the major anomalies and events described above are shown on this map. See the other world maps in this Bulletin for current two-week temperature anomalies, four-week precipitation anomalies, and (occasionally) longer-term anomalies.

# U.S. WEEKLY WEATHER HIGHLIGHTS

FOR THE WEEK ENDING MIDNIGHT JANUARY 30, 1988

Heavy precipitation was confined to central Florida, with up to 3.3 inches according to the River Forecast Center. Heavy precipitation also fell on the islands of Hawaii and Kauai, where up to 10.63 inches was reported (See Table 1). Light to moderate amounts fell across the East Coast and Appalachians, in northeastern Wisconsin and northern Michigan, in northeastern Kansas and adjacent parts of Missouri, and in the Pacific Northwest. Little or no precipitation fell across the Southwest, the Great Basin, most of the Great Plains, and much of the Northeast.

Colder conditions returned to the Middle Atlantic States and the Southeast while persisting in central Utah and western Colorado. Departures of  $-9^{\circ}\text{F}$  or less were prevalent across central Florida (See Table 2). Very mild conditions persisted in the eastern Rockies and the Great Plains west of the Mississippi and north of Texas. Departures of  $16^{\circ}\text{F}$  or more were common throughout Montana. Temperatures fell to near normal in most of Alaska with below normal temperatures across the northern part of the state.

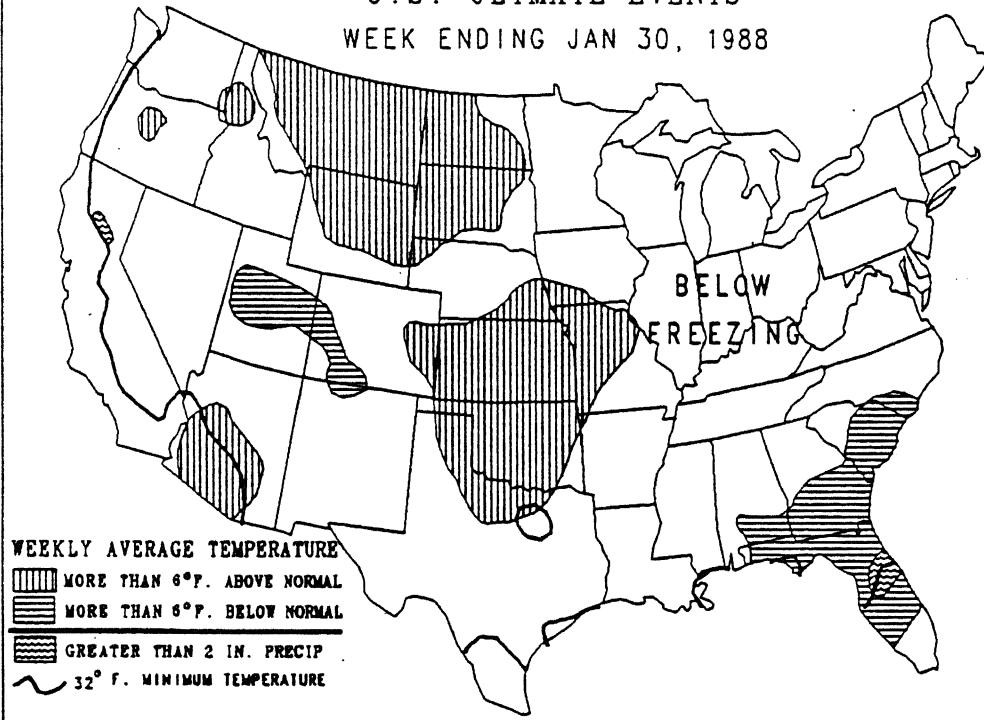
TABLE 1. Selected cities with more than three inches of precipitation for the week.

Kokee, Kauai, HI	10.63	Daytona Beach, FL	3.29
Lihue, Kauai, HI	8.15	Hilo, HI	2.95

TABLE 2. Selected cities with temperatures averaging higher than  $12^{\circ}\text{F}$  above or lower than  $9^{\circ}\text{F}$  below normal for the week.

Cut Bank, MT	+19	Delta, UT	-14
Great Falls, MT	+17	Gainesville, FL	-13
Havre, MT	+17	Tallahassee, FL	-10
Miles City, MT	+17	Jacksonville, FL	-9
Billings, MT	+16	Grand Junction, CO	-9
Worland, WY	+15	Daytona Beach, FL	-9
Sheridan, WY	+13		
Rapid City, ND	+12		

U. S. CLIMATE EVENTS  
WEEK ENDING JAN 30, 1988



## WIND-CHILL

Wind-chill is an equivalent temperature that measures the degree of physical discomfort and stress from combined cold and wind. It was developed by Siple and Passel (1941) and is based on physiological studies of the rate of heat loss for various combinations of ambient temperature and wind speed. The wind-chill equals the air temperature when the wind speed is 4 mph or less. At higher wind speeds, the wind-chill is lower than the air temperature and measures the increased rate of heat loss from the body under windy conditions.

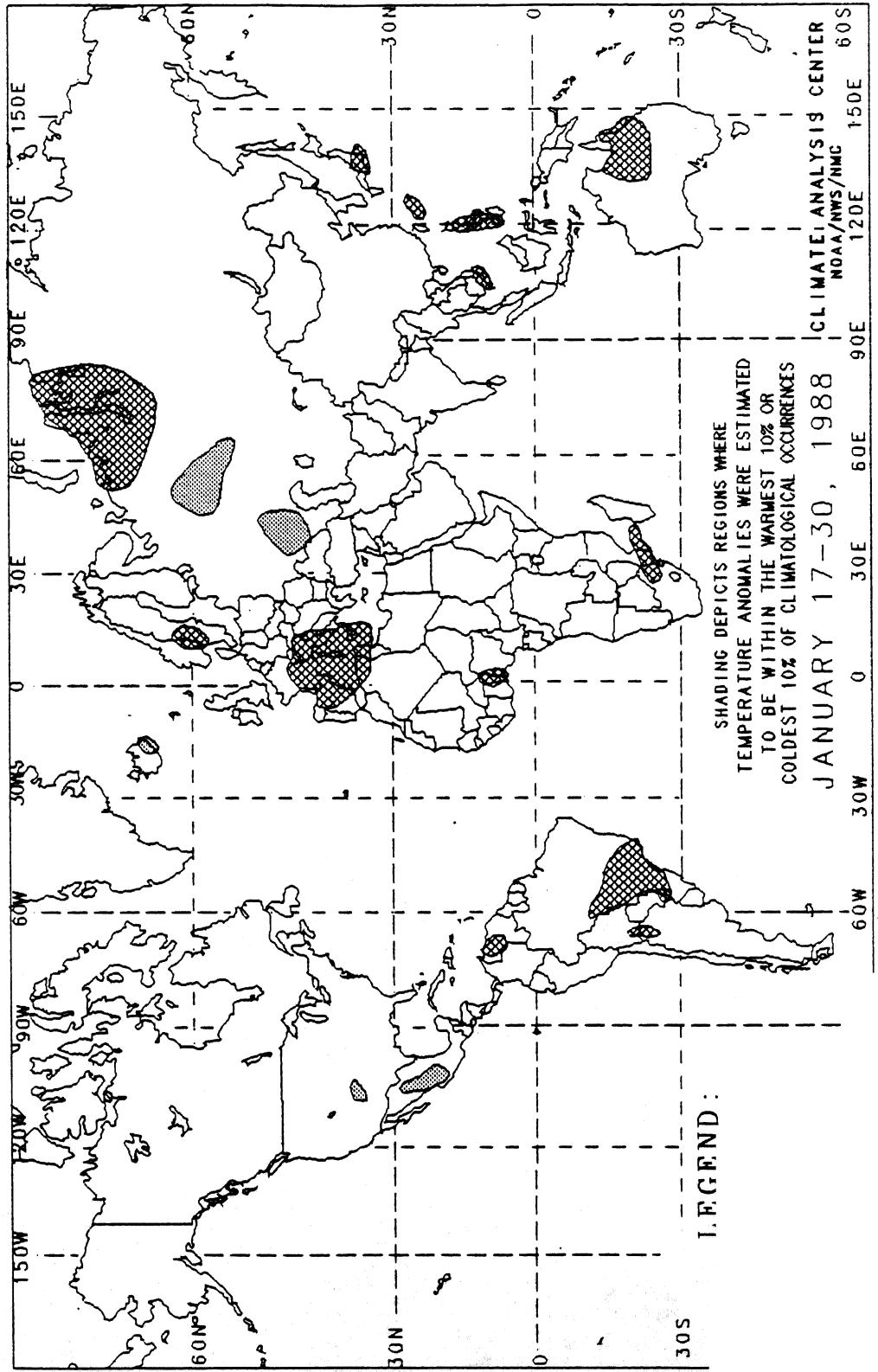
The effects of wind-chill depend strongly on the amount of clothing and other protection worn as well as on age, health, and body characteristics. As wind-chill equivalent temperatures decrease, the risk of hypothermia and frostbite from being inadequately clothed increases. Wind-chills below 0 F indicate a definite risk of frostbite or other injury to exposed flesh. Prolonged exposure at wind-chills below -20 F can be very dangerous and possibly life-threatening unless special efforts are made for protection.

The table below gives wind-chill values as a function of air temperature (abscissa) and wind speed (ordinate).

WIND CHILL TABLE		NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION															
		INDICATES THE WIND CHILL INDEX (equivalent in cooling power on exposed flesh)															
		AIR TEMPERATURE °F															
35	30	25	20	15	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45	
4	35	30	25	20	15	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45
5	32	27	22	16	11	6	0	-5	-10	-15	-21	-26	-31	-36	-42	-47	-52
10	22	16	10	3	-3	-9	-15	-22	-27	-34	-40	-46	-52	-58	-64	-71	-77
15	16	9	2	-5	-11	-18	-25	-31	-38	-45	-51	-58	-65	-72	-78	-85	-92
20	12	4	-3	-10	-17	-24	-31	-39	-46	-53	-60	-67	-74	-81	-88	-95	-103
25	8	1	-7	-15	-22	-29	-36	-44	-51	-59	-66	-74	-81	-88	-96	-103	-110
30	6	-2	-10	-18	-25	-33	-41	-49	-56	-64	-71	-79	-86	-93	-101	-109	-116
35	4	-4	-12	-20	-27	-35	-43	-52	-58	-67	-74	-82	-89	-97	-105	-113	-120
40	3	-5	-13	-21	-29	-37	-45	-53	-60	-69	-76	-84	-92	-100	-107	-115	-123
45°	2	-6	-14	-22	-30	-38	-46	-54	-62	-70	-78	-85	-93	-102	-109	-117	-125

\*Wind speeds greater than 40 MPH have little additional cooling effect.

EXAMPLE - A 30 MPH wind, combined with a temperature of 30 degrees F. (-1 degree Celsius), can have the same chilling effect as a temperature of -2 degrees F. (-19 degrees Celsius), when it is calm.

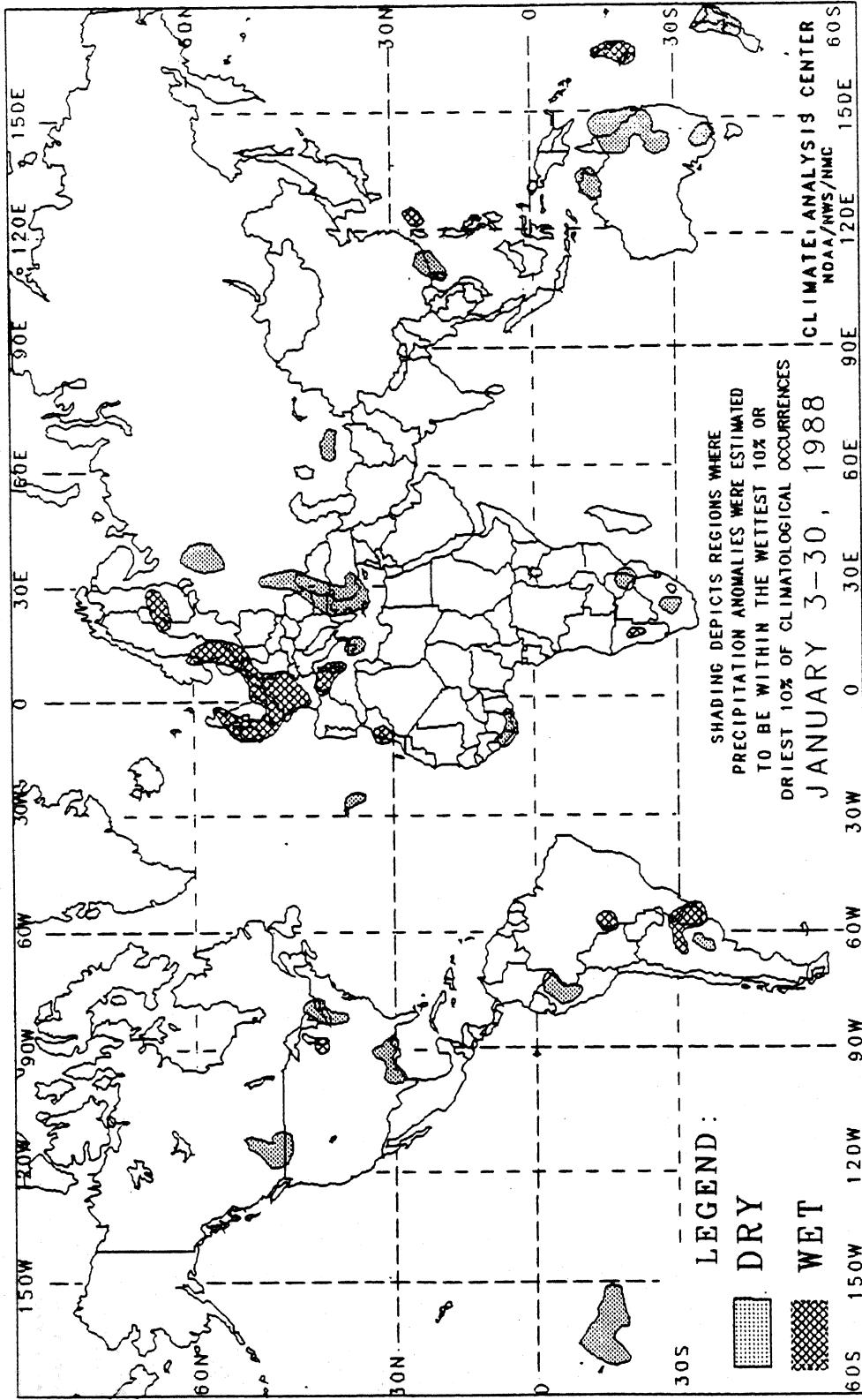


approximately 2500  
systems of temperature  
Many stations do not  
make observations at  
the estimated  
In turn may have  
air anomalies.

In some regions, insufficient data exist to determine the magnitude of anomalies. These regions are located in parts of tropical Africa, southeastern Asia, interior equatorial South America, and along the Pacific Coast. Either current data are too sparse or incomplete for analysis, or historical data are insufficient for determining decadal, or both. No attempt has been made to estimate the magnitude of anomalies in such regions.

### **magnitude of**

The chart shows general areas of two week temperature anomalies. Caution must be used in relating it to local conditions, especially in mountainous regions.



The anomalies on this chart are based on approximately 2500 observing stations for which at least 27 days of precipitation observations (including zero amounts) were received or estimated from synoptic reports. As a result of both missing observations and the use of estimates from synoptic reports (which are conservative), a dry bias in the total precipitation amount may exist for some stations used in this analysis. This in turn may have resulted in an overestimation of the extent of some dry anomalies.

In climatologically arid regions where normal precipitation for the four week period is less than 20 mm, dry anomalies are not depicted. Additionally, wet anomalies for such arid regions are not depicted unless the total four week precipitation exceeds 50 mm.

In some regions, insufficient data exist to determine the magnitude of anomalies. These regions are located in parts of tropical Africa, southwestern Asia, interior equatorial South America, and along the Arctic Coast. Either current data are too sparse or incomplete for analysis, or historical data are insufficient for determining percentiles, or both. No attempt has been made to estimate the magnitude of anomalies in such regions.

The chart shows general areas of four week precipitation anomalies. Caution must be used in relating it to local conditions, especially in mountainous regions.

